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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,614	08/19/2003	Ramesh Raskar	MERL-1483	4946

7590 04/06/2006

Patent Department
Mitsubishi Electric Research Laboratories, Inc.
201 Broadway
Cambridge, MA 02139

EXAMINER	
FUREMAN, JARED	

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/643,614	RASKAR, RAMESH	
	Examiner	Art Unit	
	Jared J. Fureman	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/17/2006 has been entered. Claims 1-20 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 6-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sitnik (US 6,300,880 B1). (Note that in this case, since the preambles of applicant's claims set forth an intended use of the structure or method steps, the preambles have not been considered as limiting the claims. See MPEP 2111.02.)

Sitnik teaches a device and method comprising: an optical transceiver (bar code reader/infrared transceiver 30, figure 2), a radio transceiver (transmitter electronics 26 and receiver electronics 25, figure 2), a memory (not labeled, the area storing ESN 22, see figure 2) storing an identification code (electronic serial number 22, see figure 2)

connected to the optical transceiver and the radio transceiver (figure 2 shows the connection of components), means (for example, the receivers and transmitters associated with the optical and radio transceivers and any other components required for receiving and transmitting) for operating at least one of the transceivers in receive mode while operating at least one of the transceivers in transmit mode, and means (the transmitter electronics 26 or transmitter portion of the bar code reader/infrared transceiver 30) for transmitting the identification code (ESN 22, see step 79 in figure 7 and/or step 98 in figure 8) by the transceiver operating in the transmit mode in response to receiving (see step 72 or 75 in figure 7 and/or step 92 or 97 in figure 8, for example) a predetermined signal (a bar code signal, for example, or an indication that the IR channel or RF channel is clear) by the transceiver operating in the receive mode (the receiver electronics 25 or receiver portion of the bar code reader/infrared transceiver 30); the identification code includes one or more dates (regarding claim 6, the identification code including one or more dates represents a functional limitation of the structure recited in claim 1. Since the structure of Sitnik is capable of storing and/or transmitting dates, Sitnik meets the claimed limitations. Note that claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function alone, see MPEP 2114); the received signal is a light signal and the transmitted signal is a radio signal; the received signal is a radio signal; means for operating at least one of the transceivers in receive mode and transmit mode while operating the other transceiver in transmit mode; means for operating at least one of the transceivers in receive mode and transmit mode while operating the other transceivers in receive

mode; means for operating at least one of the transceivers in receive mode and transmit mode while operating the other transceivers in receive mode and transmit mode; means for synchronizing the transmitting and receiving according to receiving light (for example, the optical channel must be clear (step 75, figure 7) before additional transmitting (steps 79-81, figure 7) and receiving (step 82, figure 7)); the optical transceiver is omni-directional (the photodetector 38 receives light from multiple directions); the optical transceiver is narrow beam (the LED 37 emits a narrow beam); an optical transceiver (bar code reader/infrared transceiver 30) transmitting a predetermined optical signal (an optical signal to read a bar code, see step 91 in figure 8) and a radio transceiver receiving (via receiver electronics 25) an identification code (a channel assignment, for example, see step 102 in figure 8) transmitted (by central database server 10 through transmitter 16, see figure 1) when receiving the predetermined optical signal by an identification tag (bar code 34, see figure 2) (note that the bar code signal must be received, see step 92 in figure 8, prior to any other transmitting or receiving, such as steps 98/98 and step 102, respectively) (also see figures 1, 2, 7, 8; column 21, line 9 - column 22, line 14; and column 23, line 25 - column 24, line 26).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sitnik in view of Gloton (US 5,635,701, previously cited).

The teachings of Sitnik have been discussed above. Sitnik also teaches the optical transceiver including an LED 37 and a photodetector 38 (see figure 2).

Sitnik fails to specifically teach the optical transceiver including a single photodiode configured to transmit and receive light signals.

Gloton teaches the use of an optical transceiver including a single photodiode configured to transmit and receive light signals (see column 3, lines 19-20).

In view of Gloton's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught by Sitnik, the optical transceiver including a single photodiode configured to transmit and receive light signals; in order to reduce the number of components. Furthermore, Gloton teaches that the use of a single transmitter-and-receiver diode is an art recognized functional equivalent to the use of separate transmitter and receiver diodes (see column 3 lines 19-21, of Gloton).

6. Claim 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sitnik in view of Beigel et al (US 6,784,788, previously cited).

The teachings of Sitnik have been discussed above. Sitnik also teaches antennas 28 and 29 (see figure 2)

Sitnik fails to specifically teach the radio transceiver including an antenna formed as an induction coil; the induction coil acquires power for the optical transceiver; and means for storing the power.

Beigel et al teaches a tag including a radio transceiver including an antenna formed as an induction coil; the induction coil acquires power for the device; and means (a battery) for storing the power (see column 4 lines 11-14).

In view of Beigel et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught by Sitnik, the radio transceiver including an antenna formed as an induction coil; the induction coil acquires power for the optical transceiver; and means for storing the power; in order to provide a power source for the device that does not need periodic replacement.

Response to Arguments

7. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. The teachings of Sitnik have been discussed above. Applicants should note that while Sitnik may teach elements or method steps in addition to those recited in applicant's claims, all of applicant's claims use the transitional phrase "comprising", which is open-ended and does not exclude additional, unrecited elements or method steps (see MPEP 2111.03[R-2]). Thus, it is believed that the teachings of Sitnik, Gloton and Beigel et al meet the claimed limitations.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Haulk et al (US 7007,219), Chaco (US 7,012,534), Chaco (US 5,465,082), Borras et al (US 5,301,353), Pulkkinen et al (US 6,954,148), Hook et al (US 2001/0054005) all teach devices and methods for communicating using radio frequency and/or optical transceivers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared J. Fureman whose telephone number is (571) 272-2391. The examiner can normally be reached on 7:00 am - 4:30 PM M-T, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jared J. Fureman
Primary Examiner
Art Unit 2876

April 1, 2006